

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel Claims 1-24, without prejudice to or disclaimer of the subject matter therein, and add new Claims 25-42 as follows:

Listing of Claims:

1-24 (Canceled).

25. (NEW) A method of preparing a fire-retardant petroleum composition, comprising:

adding a petroleum polymer having a hydroxyl group to liquid ammonia to form a solution;

subsequently adding diammonium phosphate to the solution and binding diammonium phosphate groups to the petroleum polymer; and

crosslinking the petroleum polymer, thereby forming a fire-retardant petroleum composition.

26. (NEW) A method according to Claim 25, further comprising heating the liquid ammonia.

27. (NEW) A fire-retardant petroleum composition prepared by:

adding a petroleum polymer having a hydroxyl group to water, thereby forming a solution;

adding ammonium hydroxide to the solution; and

subsequently adding diammonium phosphate to the solution and binding diammonium phosphate groups to the petroleum polymer; and

crosslinking the petroleum polymer, thereby forming a fire-retardant petroleum composition.

28. (NEW) A fire-retardant petroleum composition according to Claim 27, wherein said petroleum polymer is selected from the group consisting of polystyrene, polyethylene, polypropylene, acrylic polymers, polyurethanes, and combinations thereof.

29. (NEW) A fire-retardant petroleum composition prepared by:

adding a petroleum polymer having a hydroxyl group to water, thereby forming a solution;

adding ammonium hydroxide to the solution;

subsequently adding at least one diammonium salt to the solution and binding a diammonium group to the petroleum polymer; and

crosslinking the petroleum polymer, thereby forming a fire-retardant petroleum composition.

30. (NEW) A fire-retardant petroleum composition according to Claim 29, wherein the diammonium salt is selected from the group consisting of diammonium

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phosphate, diammonium sulfate, diammonium chromate, diammonium borate, and combinations thereof.

31. (NEW) A fire-retardant petroleum composition according to Claim 29, wherein the diammonium salt is diammonium phosphate.

32. (NEW) A fire-retardant petroleum composition according to Claim 29, wherein the diammonium salt is selected from the group consisting of diammonium sulfate, diammonium chromate, diammonium borate, and combinations thereof.

33. (NEW) A fire-retardant petroleum composition according to Claim 29, wherein said petroleum polymer is selected from the group consisting of polystyrene, polyethylene, polypropylene, acrylic polymers, polyurethanes, and combinations thereof.

34. (NEW) A fire-retardant petroleum composition according to Claim 29, wherein said petroleum polymer is polyethylene or polypropylene.

35. (NEW) A fire-retardant petroleum composition made according to Claim 25.

36. (NEW) A method of preparing a fire-retardant petroleum composition, comprising:

adding one or more petroleum polymers having a hydroxy group to water, thereby forming a solution;

catalytically binding a diammonium group to the one or more petroleum polymers in solution; and

crosslinking the one or more petroleum polymers, thereby forming a fire-retardant petroleum composition.

37. (NEW) A petroleum-based fire retardant comprising one or more petroleum molecules having an oxygen atom from a hydroxyl group, wherein said one or more petroleum molecules are crosslinked by a diammonium moiety.

38. (NEW) A petroleum-based fire retardant according to Claim 37, wherein the diammonium moiety is diammonium phosphate.

39. (NEW) A method for providing fire retardant properties to a product, comprising:

coating a product with a fire-retardant petroleum composition according to Claim 27; and

drying the coated product, thereby forming a fire-retardant coating.

40. (NEW) A method for providing fire retardant properties to a product, comprising:

adding a fire-retardant petroleum composition according to Claim 27 to a slurry or suspension; and

evaporating a portion of water from said slurry or suspension, thereby forming a fire-retardant product.

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41. (NEW) A method for providing fire retardant properties to a product, comprising:
coating a product with a fire-retardant petroleum composition according to Claim 29; and
drying the coated product, thereby forming a fire-retardant coating.

42. (NEW) A method for providing fire retardant properties to a product, comprising:
adding a fire-retardant petroleum composition according to Claim 29 to a slurry or suspension; and
evaporating a portion of water from said slurry or suspension, thereby forming a fire-retardant product.